

Response to Office Action
Dated April 29, 2003

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REMARKS

This is in response to the Office Action dated April 29, 2003. Reconsideration is respectfully requested.

Summary of the Objections to the Drawings

Applicant acknowledges, with appreciation, that the proposed drawing amendments filed June 12, 2003 are approved. Applicant submits herewith proper drawings, Figures 4-6, to avoid abandonment of the application.

In response to the Examiner's objection to Figure 1, applicant provides herewith a proposed correction to that figure amended with the term "Prior Art" in red ink for the Examiner's review and approval.

Summary of Claim Objections

Applicant has canceled Claims 46 and 47, rendering the objections to these claims moot.

Summary of Rejections under 35 USC 103

Claims 23-47 are pending. Claims 23-27 and 31-47 are rejected as obvious under 35 USC 103 over U.S. Patent No. 4,336,050 to Northup in view of U.S. Patent No. 781,539 to Marsh. Claims 28-30 are rejected as obvious over Northup and Marsh and further in view of U.S. Patent No. 5,318,616 to Keller.

Applicant respectfully traverses the rejections, contending that the cited references fail to meet the requirements necessary to establish a prima facie case of obviousness as explained in the arguments presented below.

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The Argument

To establish a prima facie case of obviousness, three criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference teachings. Second, there must be a reasonable expectation of success. Third, the prior art reference or references when combined, must teach or suggest all the claim limitations. (MPEP, Section 2143, Page 2100-122.) As shown below on a claim-by-claim basis, the cited references consistently fail to meet at least one of these criteria and hence cannot provide proper support for an obviousness rejection of any of applicant's claims.

Claim 23

Claim 23 is a method claim for producing a parison in a parison mold having a separate neck mold. Claim 23 recites, in relevant part, the steps of pressing a pressing plunger into a gob of molten glass in the parison mold, exerting pressure on the gob with a pressing element until the mold cavity is completely filled with molten glass, wherein the pressing plunger lies against the neck mold and completely forms an axially outer sealing edge. The advantage provided by this arrangement is that the outer sealing edge is formed without a seam line which might otherwise create problems in sealing the bottle eventually formed from the parison.

The Examiner admits, on page 3 of the Action, that Northup does not teach a plunger being configured to completely form an axially outer sealing edge as recited in Claim 23, but cites Marsh, Figures 9-11, as teaching this concept. The Examiner rejected Claim 23, stating that it

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would have been obvious to modify Northup by the teachings of Marsh to obtain the invention recited in the claim.

Applicant respectfully contends that there is no motivation for the proposed modification, as Northup clearly teaches away from using the pressing plunger for any purpose other than to produce a cavity in the parison. The objective of Northup, stated at column 2, lines 3-12, is to produce parisons by providing a process "which is less demanding of maintenance and equipment and precision operations". Northup expressly states that this objective is achieved by using the pressing plunger only to produce a cavity in the parison, as shown at column 2, lines 13-18:

This objective is accomplished by using the mold cavity plunger only as a device to produce a bubble or cavity in the parison and limiting its travel to a predetermined position where it makes the best possible match with the guide ring (or the neck ring in the event that a guide ring is not used).

Any other use of the plunger, such as proposed by the Examiner, would be contrary to the express objective and teachings of Northup. Use of the plunger for other purposes would furthermore change the expressly stated principle of operation of this reference, that principle being to use the plunger only to create a cavity in a parison and limiting its travel to a predetermined position where it makes the best possible match with the guide ring. Modification of Northup, as proposed by the Examiner, would render the invention disclosed therein unsatisfactory for its intended purpose, that purpose being its expressly stated objective, to produce

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parisons by providing a process "which is less demanding of maintenance and equipment and precision operations".

According to the MPEP, Section 2143.01, Page 2100-124:

If the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.

The MPEP further states, on Page 2100-125, that:

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the reference are not sufficient to render the claims prima facie obvious.

Clearly, Marsh cannot properly be combined with Northup, as this combination would be contrary to both Northup's stated objective, and the method for achieving that objective, which teaches away from the modification proposed by the Examiner. The proposed modification furthermore changes the principle of operation of Northup and would render the invention disclosed therein unsatisfactory for its expressly intended purpose. Applicant respectfully contends that the cited references are not properly combinable, fail to meet the criteria necessary to establish a prima facie case of obviousness and, therefore, cannot support a rejection of Claim 23 on the basis of obviousness.

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Claims 24-30 depend, either directly or indirectly, upon Claim 23 and should be allowable for the same reasons that Claim 23 is allowable.

Claims 28-30

Claims 28-30 are rejected as obvious over the combination of Northup, Marsh and Keller. These claims recite the steps of sensing the movement of the pressing element to determine a maximum penetration depth of the pressing element into the mold cavity and using this information to control the mass of the gob of molten glass introduced into the cavity.

The Examiner admits, on page 4 of the Action, that Northup and Marsh do not sense plunger movement, and cites Keller as teaching the use of a plunger motion sensor to monitor and control gob size. However, modifying Northup by the teachings of Keller to use plunger motion to control gob size is not proper for the same reasons that modifying Northup by the teachings of Marsh is improper, namely, it is contrary to the express teachings of Northup to use the plunger for any purpose other than to form the cavity in the parison. Northup's objective is to produce parisons by providing a process "which is less demanding of maintenance and equipment and precision operations". Clearly, by adding to Northup motion sensors, control systems and feed-back loops necessary to implement the teachings of Keller, the objective and teachings of Northup would be utterly subverted as more complicated equipment, greater maintenance and more precision of component movement and measurement thereof would be required. Northup teaches away from such complications and there is clearly no motivation for the proposed modification. Furthermore, Northup teaches limiting the travel of the

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plunger to a predetermined position where it makes the best possible match with the guide ring. Such a limitation on plunger travel renders it unusable for sensing gob mass, since the plunger motion must be proportional to gob mass to effectively control this parameter. The modification of Northup by the teachings of Keller would, as with Marsh, render Northup unsatisfactory for its intended purpose and change its principle of operation. The proposed combination is improper and cannot reasonably sustain a rejection on the basis of obviousness.

Furthermore, even if Northup were modified by the teachings of Keller as proposed by the Examiner, the combination would not yield applicant's invention. Claims 28-30 recite not the use of plunger motion to control the gob mass, but the use of the pressing element motion. The plunger motion cannot be used by the applicant to control gob mass because, as shown in Figure 4, plunger 10 must move into engagement with the neck tool 2 so that forming ring 21 can form the axially outer sealing edge of the neck. Thus, plunger motion is not variable and, more importantly, not proportional to gob mass. Pressing element 44, as recited in Claims 28-30, is the element whose motion is indicative of gob mass and, thus, may be used to control this parameter.

A requirement necessary to establish a prima facie case of obviousness is that, as stated above, the prior art reference or references when combined, must teach or suggest all the claim limitations. Clearly, the proposed combination of Northup, Marsh and Keller fail to teach using pressing element motion to control gob mass as recited in Claims 28-30, and thus these references cannot properly support a rejection

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of these claims on the basis of obviousness. Claims 28-30 should be allowable because there is no motivation for the proposed combination, and even if such combination were effected it would not teach or suggest all claim limitations.

Claim 31

Claim 31 is an independent apparatus claim which recites, in relevant part, a "pressing plunger being configured to completely form said axially outer sealing edge". As admitted by the Examiner on page 3 of the Action, Northup does not teach such a pressing plunger, and the Examiner relies on the teachings of Marsh to modify the plunger disclosed in Northup to reject Claim 31. However, it was shown conclusively in arguments presented above that the combination of Northup and Marsh is improper because: (1) Northup teaches away from the proposed combination; (2) because modifying Northup as proposed would change its principle of operation; and (3) because modifying Northup as proposed would render it unsatisfactory for its intended purpose. Analogous to Claim 23, these factors indicate, for Claim 31, that there is no motivation for the proposed combination. Lacking motivation, the requirements for establishing a prima facie case of obviousness are not met. Thus, the references cannot properly support a rejection of Claim 31 on the basis of obviousness, and the rejection should be withdrawn.

Claims 32-45 depend, either directly or indirectly, upon Claim 31 and should be allowed for the same reasons that Claim 31 is allowable.

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Claim 34

Claim 34 depends upon Claim 31 and recites a pressing plunger having an annular end face that is wider than the pressing plunger and a ring being formed in the annular end face. This structure is not taught or suggested in Northup, and, as indicated by the arguments presented above, it is improper to modify Northup by the teachings of Marsh to include such a ring in the apparatus disclosed in Northup. Thus, Claim 34 is further allowable over the cited references because Northup does not teach such a plunger, and there is no motivation to modify Northup to include this structure.

Claims 46 and 47 are canceled, rendering any rejections moot.

Summary

Applicant has shown that the proposed combination of Northup and Marsh, as well as Northup, Marsh and Keller, fail to meet the requirements necessary to establish a prima facie case of obviousness in support of the claim rejections because there is no motivation for the combination and even when the combination is effected, all claim elements for certain claims are not taught or suggested.

Summary of Claim Fees

Applicant believes that there may be an outstanding fee due for extra claims presented when the Second Preliminary Amendment, dated May 16, 2002, was filed on May 21, 2002. The Amendment canceled Claims 12-22 and added Claims 23-47, leaving 25 total claims and 3 independent claims. If an oversight did occur, it was entirely without deceptive intent. If there is an outstanding fee for the calculation of claims

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based on this Amendment, the Patent Office is authorized to charge Deposit Account No. 19-5425 for the \$90 due for the payment of five extra claims. The number of independent claims did not exceed the limit. A duplicate of this paper is enclosed for charging purposes should it be necessary to charge the Deposit Account.

In view of the arguments and amendments presented, applicant contends that the application is in condition for allowance and respectfully requests that it be passed to issue.

Respectfully submitted,

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Attachments